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Washington, DC 20005-3096

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| EXAMINER |
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SPAHN, GAY

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| ART UNIT | PAPER NUMBER |
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3635

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01/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/506,420 | Applicant(s) KAWAKAMI ET AL. | |
| | Examiner Gay Ann Spahn | Art Unit 3635 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/20/07, 06/11/07, and 10/02/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-8 is/are pending in the application.
 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/02/04 & 02/20/207 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>23 October 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 23 October 2006 was filed after the mailing date of the first Non-Final Office Action on 22 March 2006 and again on 18 October 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). **The drawings must show every feature of the invention specified in the claims.** Therefore, the

(1) "predetermined angle range" recited in claims 1-3, and

(2) "tilt angle" in claim 2,

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Applicants' explanation that the drawing objection "is not understood as the referenced claim limitations allegedly not shown in the drawings represent relative positioning of claimed structures rather than structural elements themselves" is not relevant because anything claimed in the claims must be shown in the drawings and therefore, the examiner is repeating her drawing objection.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because:

(1) the arrows shown in Fig. 5B (see right-hand side of figure), Fig. 9 (upper right-hand corner of figure), and Fig. 10 (left-hand side of figure above reference numeral "200") should be labeled with a reference numeral/character and given a lead line leading from the reference numeral/character to the arrow in order to explain what they represent.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art disclosed on page 1, line 11 through

page 4, line 12 of the specification and shown in Figs. 13A, 13B, and 13C (hereinafter referred to as "APPLICANTS' ADMITTED PRIOR ART") in view of GUSTAFSON (U.S. Patent No. 4,344,195).

As to claim 1, APPLICANTS' ADMITTED PRIOR ART discloses an adjustable bed comprising:

a laterally tiltable platform (1015);

a tilt mechanism (either 1035 L or 1035R) adapted to tilt the platform (1015) laterally.

However, APPLICANTS' ADMITTED PRIOR ART fails to explicitly disclose a load-applying unit constituted from a tension spring and adapted to apply, in a state in which the platform is tilted within a predetermined angle range during a tilt operation of the tilt mechanism, a load to the platform in a direction that suppresses an expansion of the predetermined angle range, so as to prevent one of a compression load and a tension load exerted on the tilt mechanism by the platform from reversing to the other one of the compression load or the tension load.

GUSTAFSON discloses a load-applying unit (either of springs 21 or 22 on pivot arm mechanism 14 shown in Figs. 2 and 3 or tension spring 54 in pivot arm mechanism 37 shown in Fig. 5) constituted from a tension spring. Applicants argue that the springs 21 or 22 of GUSTAFSON shorten in going from the position in Fig. 2 to the position in Fig. 3 so it appears that Applicants are trying to argue that the springs are compression springs, not tension springs. However, the examiner notes that in going from the position in Fig. 3 to the position in Fig. 2, the springs are shortening so that the springs

are in tension. However, even if the embodiment of the load applying units 21 and 22 are compression springs and not tensions springs. the embodiment shown in Fig. 5 clearly teaches a tension spring. Therefore, it is clear that GUSTAFSON teaches a load applying unit in the form of a tension spring.

Further, when APPLICANTS' ADMITTED PRIOR ART is modified by placing one of the springs (21/22 or 54) of GUSTAFSON between the support arms 354L and 356L of the APPLICANTS' ADMITTED PRIOR ART, the resulting adjustable bed from the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON is capable of performing the intended use of being adapted to apply, in a state in which the platform is tilted within a predetermined angle range during operation of the tilt mechanism, a load to the platform in a direction that suppresses an expansion of the predetermined angle range, so as to prevent one of a compression load and a tension load exerted on the tilt mechanism by the platform from reversing to the other one of the compression load or the tension load.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the adjustable bed of APPLICANTS' ADMITTED PRIOR ART by including a load-applying unit as taught by GUSTAFSON in order to balance the mass of the platform as it is tilted.

As to claim 2, APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON discloses the adjustable bed of claim 1 as discussed above, and the resulting adjustable bed from the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON would also have the predetermined angle range include a tilt angle at

which a gravitational center of the platform during the tilt operation traverses a vertical line containing a rotational center of the platform with the load-applying unit in a non-operational state.

As to claim 3, APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON discloses the adjustable bed of claim 1 as discussed above, and the resulting adjustable bed from the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON would also have the predetermined angle range be from 30 degrees to 90 degrees inclusive, with reference to the platform (1015 of APPLICANTS' ADMITTED PRIOR ART) a horizontal state.

As to claim 7, APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON discloses the adjustable bed of claim 1 as discussed above, and APPLICANTS' ADMITTED PRIOR ART also discloses that the tilt mechanism (either 1035L or 1035R) includes an elevation unit (either 1035L or 1035R) disposed on either side of the platform (1015), in order to elevate the platform (1015) up and down, and the platform (1015) is tilted laterally by driving one of the elevation units (either 1035L or 1035R).

As to claim 8, APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON discloses the adjustable bed of claim 7 as discussed above, and APPLICANTS' ADMITTED PRIOR ART also discloses that the platform (1015) is placed on a support base (1032) via a roller (either 1202 or 1203) disposed on either side of the platform (1015), and when one side of the platform (1015) is raised by the elevation unit (either 1035L or 1035R) corresponding to the side, the roller (either 1202 or 1203) on the other side rolls over the support base (1032) toward the side being raised, and the platform

(1015) tilts with a center of the roller (either 1202 or 1203) on the other side as a rotational center.

Response to Arguments

Applicant's arguments filed 20 February 2007 have been fully considered but they are not persuasive.

In the first full paragraph on page 13 in the Remarks section of the "Amendment" filed on 20 February 2007, Applicants appear to be arguing a 102 rejection with respect to GUSTAFSON when the examiner has not applied GUSTAFSON in a 102 rejection, but as the secondary reference in a 103 rejection so that Applicants' reference to anticipation under 102 is not understood.

In the paragraph spanning pages 12 to 13 in the Remarks section of the "Amendment" filed on 20 February 2007, Applicants state that the load applying unit of GUSTAFSON is not "to apply, in a state in which the platform is tilted within a predetermined angle range during a tilt operation of the tilt mechanism, a load to the platform in a direction that suppresses an expansion of the predetermined angle range, so as to prevent one of a compression load and a tension load exerted on the tilt mechanism by the platform from reversing to the other one of the compression load or the tension load." However, as stated above, it is the examiner's position that GUSTAFSON discloses a load-applying unit (either of springs 21 or 22 on pivot arm mechanism 14 shown in Figs. 2 and 3 or tension spring 54 in pivot arm mechanism 37 shown in Fig. 5) constituted from a tension spring, and when APPLICANTS' ADMITTED

PRIOR ART is modified by placing one of the springs (21/22 or 54) of GUSTAFSON between the support arms 354L and 356L of the APPLICANTS' ADMITTED PRIOR ART, the resulting adjustable bed from the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON is capable of performing the intended use of being adapted to apply, in a state in which the platform is tilted within a predetermined angle range during operation of the tilt mechanism, a load to the platform in a direction that suppresses an expansion of the predetermined angle range, so as to prevent one of a compression load and a tension load exerted on the tilt mechanism by the platform from reversing to the other one of the compression load or the tension load.

Applicants also argue that "Gustafson does not disclose or suggest recognition and of the necessity to suppress the expansion of the tilt angle, and is not motivated to do so" and that "[a]t best, Gustafson can achieve only an adjustable bed that includes load-applying unit 21, 22 and so on for guiding the movement of the platform."

The examiner disagrees that the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON fails to obviate amended claims 1-3, 7, and 8. APPLICANTS' ADMITTED PRIOR ART teaches the basic invention except that APPLICANTS' ADMITTED PRIOR ART fails to teach or suggest a tension spring between the two support arms 354L and 356L as shown in Fig. 9. Because of the lack of a tension spring between the support arms 354L and 356L, and as stated by Applicants on page 3, lines 10-16, of the specification, the adjustable bed of APPLICANTS' ADMITTED PRIOR ART has a slight amount of play in parts where the components are coupled to one another due to the nature of the manufacturing process,

the relative positions of these coupling parts changes instantaneously when a load reversal as described above occurs, causing the operation of the adjustable bed to become intermittent, and resulting in jolting/jarring motion. GUSTAFSON clearly teaches the use of a spring between support arms. Therefore, to place a spring between the support arms of APPLICANTS' ADMITTED PRIOR ART as taught by GUSTAFSON would be obvious and the combination of APPLICANTS' ADMITTED PRIOR ART in view of GUSTAFSON would be capable of performing the intended use of being adapted to apply, in a state in which the platform is tilted within a predetermined angle range during operation of the tilt mechanism, a load to the platform in a direction that suppresses an expansion of the predetermined angle range, so as to prevent one of a compression load and a tension load exerted on the tilt mechanism by the platform from reversing to the other one of the compression load or the tension load.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Friday, 10:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard E. Chilcot can be reached on (571)-272-6777. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

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^{GAS}
Gay Ann Spahn, Patent Examiner
December 19, 2007

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